FlyBy Math^{TM} Alignment
Missouri Mathematics
Grade-Level Expectations

Strand: Number and Operations

1. Understand numbers, ways of representing numbers, relationships among numbers and number systems.

B. Represent and use rational numbers

Grade-Level Expectation	***FlyBy Math*^{TM} Activities**
Use fractions, decimals and percents to solve problems. (MA 1 3.4)	--Use calculations and experimental evidence to predict, describe, and explain several aircraft conflict problems.

3. Compute fluently and make reasonable estimates

E. Use proportional reasoning

Grade-Level Expectation	***FlyBy Math*^{TM} Activities**
Solve problems involving proportions, such as scaling and finding equivalent ratios. **(MA 1 3.3)**	--Represent distance, speed, and time relationship for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system. --Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.

Strand: Algebraic Relationships

1. Understand patterns, relations and functions

C. Classify objects and representations

Grade-Level Expectation	***FlyBy Math*^{TM} Activities**
Compare and contrast various forms of representations of patterns. **(MA 4 1.6)**	--Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.

D. Identify and compare functions

Grade-Level Expectation	***FlyBy Math*^{TM} Activities**
Compare properties of linear functions between or among tables, graphs, and equations. **(MA 4 1.6, 3.6)**	--Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates. --Interpret the slope of a line in the context of a distance-rate-time problem.

2. Represent and analyze mathematical situations and structures using algebraic symbols

A. Represent mathematical situations

Grade-Level Expectation	*FlyBy Math*[TM] **Activities**
Use symbolic algebra to represent and solve problems that involve linear relationships, including recursive relationships. (MA 4 1.6,3.1)	--Represent distance, speed, and time relationship for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.

3. Use mathematical models to represent and understand quantitative relationships

A. Use mathematical models

Grade-Level Expectation	*FlyBy Math*[TM] **Activities**
Model and solve problems, using multiple representations such as graphs, tables, equations or inequalities. (MA 4 1.6,3.6)	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.

4. Analyze change in various contexts

A. Analyze change

Grade-Level Expectation	*FlyBy Math*[TM] **Activities**
Analyze the nature of changes (including slope and intercepts) in quantities in linear relationships. (MA 2,4 1.6,4.1)	--Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates. --Interpret the slope of a line in the context of a distance-rate-time problem.

Strand: Geometric and Spatial Relationships

4. Use visualization, spatial reasoning and geometric modeling to solve problems.

B. Draw and use visual models

Grade-Level Expectation	*FlyBy Math*[TM] **Activities**
Draw or use visual models to represent and solve problems (MA 2 3.1)	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.

Strand: Data and Probability

2. Select and use appropriate statistical methods to analyze data.

B. Compare data representations

Grade-Level Expectation	*FlyBy Math*[TM] **Activities**
Compare different representations of the same data and evaluate how well each representation shows important aspects of the data. (MA 3 3.6)	--Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.